

**UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
RICHMOND DIVISION**

UNITED STATES OF AMERICA

v.

OKELLO T. CHATRIE,

*Defendant.*

Case No. 3:19-cr-00130-MHL

**THIRD DECLARATION OF MARLO MCGRUFF**

I, Marlo McGriff, respectfully submit this declaration in regard to the above-captioned matter. I make this declaration based on my knowledge of the facts stated herein.

1. Appended as Exhibit A and Exhibit B are documents in Google's possession responsive to the subpoena issued by the Court pursuant to Federal Rule of Criminal Procedure 17(c) on July 20, 2020 (ECF Nos. 133, 133-1) ("the Subpoena"). These documents consist of Google's subscriber registration record (the "Registration Record") and an audit record (the "Audit Record") associated with the Google Account [REDACTED], which I understand to be the account that is the subject of the Subpoena (the "Subject Account"). The Registration Record documents certain subscriber registration information associated with the Subject Account. The Audit Record documents user consent to Location History on the Subject Account. The information provided below is intended to translate the technical information in the Audit Record for the Court and to provide other information responsive to the Subpoena.

**I. Account Creation**

2. The Registration Record reflects that the Subject Account was created on August 20, 2017 (UTC) from the IP Address [REDACTED].

3. The Registration Record reflects that the Google Account

[REDACTED] is associated with the numerical Google Account ID

[REDACTED].

## II. “Location History” (“LH”) Setting and Location Reporting Setting

4. As I testified in my first declaration, *see* ECF No. 96-1 at 2, and as Google stated in its amicus brief, *see* ECF No. 73 at 7, a user must opt in to LH before location data can be stored in the LH service. As I also testified in my first declaration, *see* ECF No. 96-1 at 3, for LH to collect location data from a particular device, the “Location Reporting” subsetting within LH must be on for that device.

5. The Audit Record reflects that the user of the Subject Account opted in to the LH service and enabled Location Reporting for a Samsung device on July 9, 2018 at approximately 04:09 (UTC)<sup>1</sup> as follows:

- a. The Sensorvault server recorded LH as being successfully enabled for Google Account ID [REDACTED].
- b. Location Reporting was enabled for a device with device tag [REDACTED], which was a Samsung Galaxy S9 Plus (SM-G965U).
- c. The user opted in to LH either through device settings or through a Google application on the Samsung device. This is indicated by the fact that Location Reporting was enabled for the Samsung device at the same time that the user opted in to LH, which can only happen when the opt-in occurs through a device-based consent flow versus a browser-based consent flow.

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<sup>1</sup> All timestamps in the Audit Record are in standard millisecond format.

6. The Audit Record did not record the specific interface (i.e., the particular application or settings opt-in screen) through which the user enabled LH. But as of July 9, 2018 (UTC) and at all times since then, the steps and consent text necessary to opt in to LH—what Google refers to as the “supported consent flow”—have been consistent across all applications and services and across all Android devices and operating systems. Moreover, as of July 9, 2018 (UTC) and at all times since then, the Sensorvault server rejects any attempted opt-in to LH from an unsupported consent flow or device—i.e., any attempt to enable LH that does not follow the steps described here will be unsuccessful. *See* ECF No. 110-1 at 2. Because the Audit Record shows Google’s Sensorvault server recording that LH was successfully enabled on the Subject Account, the user necessarily opted in through a supported on-device consent flow. If the user had encountered an unsupported on-device consent flow, the Audit Record would not show a successful enablement of LH.

7. Under the supported consent flow as of July 9, 2018 (UTC), across all applications and services, and across all Android devices and operating systems, a user who opted in to LH either directly from within device settings or when attempting to use a feature powered by LH (such as features within the Google Maps application) would be presented with an opt-in screen containing the following text:

**Location History**

Saves where you go with your devices

This data may be saved and used in any Google service where you were signed in to give you more personalized experiences. You can see your data, delete it and change your settings at [account.google.com](https://account.google.com).

NO THANKS

TURN ON.<sup>2</sup>

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<sup>2</sup> This text is the same text that would appear on the second screen I described in my

8. Across applications and services, and across Android devices and operating systems, tapping on an expansion arrow next to the text “Location History: Saves where you go with your devices” would present users with additional information about LH, which reads:

### **Location History**

Saves where you go with your devices

Location History saves where you go with your devices. To save this data, Google regularly obtains location data from your devices. This data is saved even when you aren’t using a specific Google service, like Google Maps or Search.

If you use your device without an internet connection, your data may be saved to your account once you return online.

Not all Google services save this data to your account.

This data helps Google give you more personalized experiences across Google services, like a map of where you’ve been, tips about your commute, recommendations based on places you’ve visited, and useful ads, both on and off Google.

This data may be saved and used in any Google service where you were signed in to give you more personalized experiences. You can see your data, delete it and change your settings at [account.google.com](https://account.google.com).

NO THANKS          TURN ON

9. Tapping “TURN ON” will enable LH on the user’s Google Account.

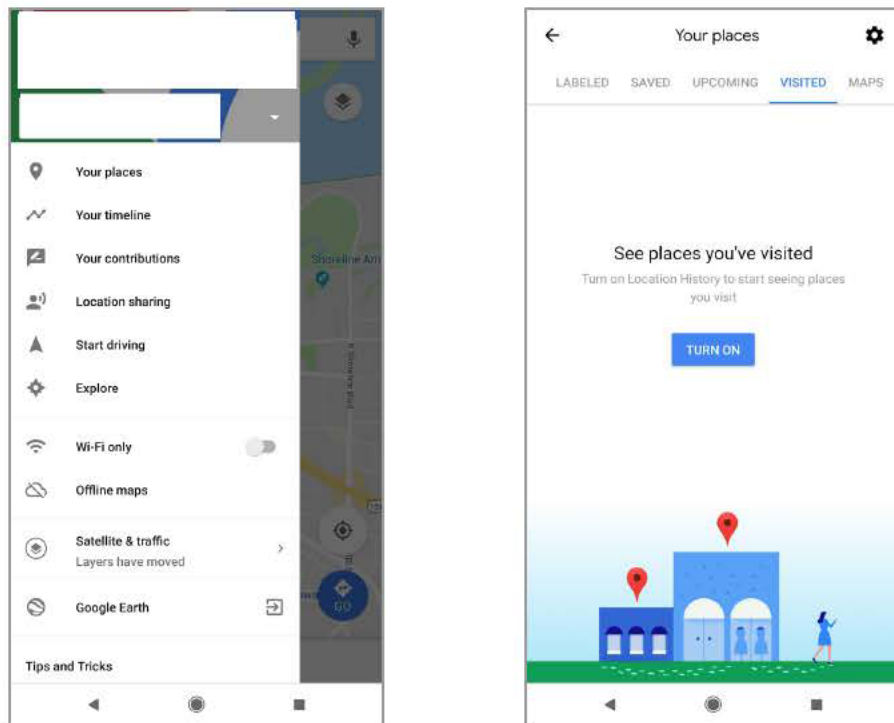
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Supplemental Declaration. *See* ECF No. 110-1 at ¶ 7 (“By 2017 at the latest, it was not possible for a user to successfully enable LH solely by tapping on “YES, I’M IN” as depicted on the final screen in the McInville Video. Instead, a user who tapped on “YES, I’M IN” when prompted would be presented with a second opt-in screen. Only by opting in via that second screen could the user successfully enable LH for her account.”).

10. The text quoted in ¶¶ 7-8 is the same text that the user of the Subject Account would have seen on July 9, 2018 (UTC), and the user would have had to tap “TURN ON” to successfully opt in to LH as reflected in the Audit Record.

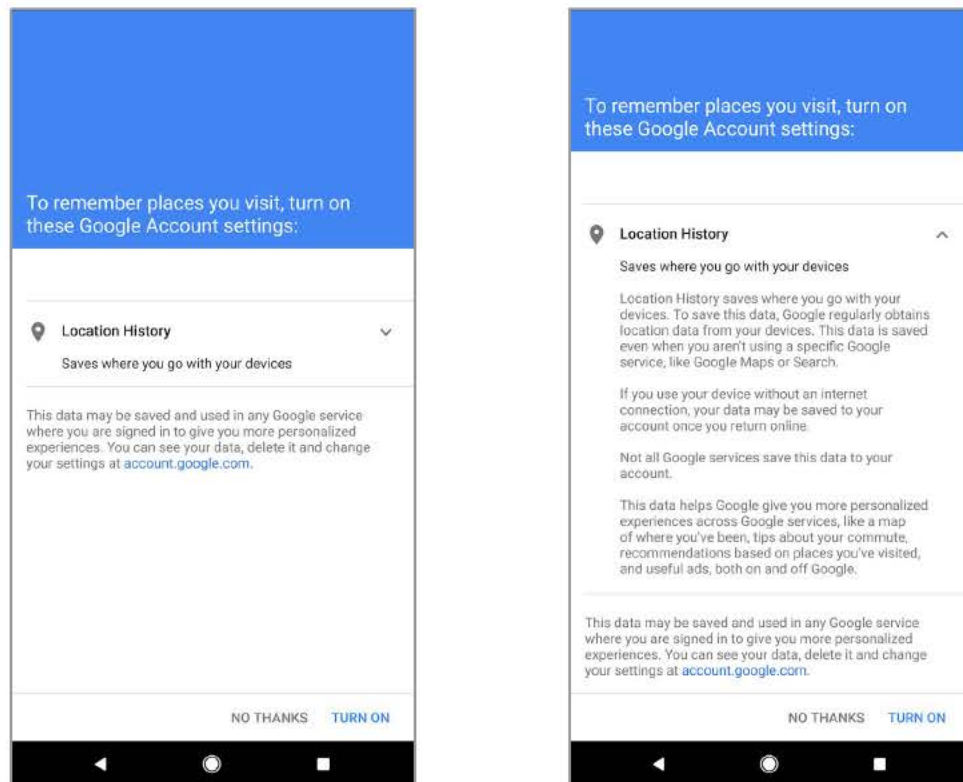
11. The user of the Subject Account would have encountered this consent text and had to tap “TURN ON” to enable LH no matter what application or service the user was using when the user opted in to LH. The specific layout and appearance of that text varies depending on what application or service the user is using when the user enables LH, but the consent text and steps are the same for all apps and services. Below are examples of how that consent text could have appeared to the user.

12. For example, if the user of the Subject Account navigated through the Google Maps application and selected “Your places” on the left-hand screen below, the user would have been presented with the right-hand screen below when selecting “Visited” at the top:<sup>3</sup>



<sup>3</sup> Personal identifying information has been redacted from these screenshots.

13. If the user then tapped on “Turn On” on the right-hand screen above, the user would have been presented with the left-hand screen below. And if the user then tapped on the gray expansion arrow next to “Location History: Saves where you go with your devices” on the left-hand screen below, the user would next have been presented with the additional information depicted on the right below:

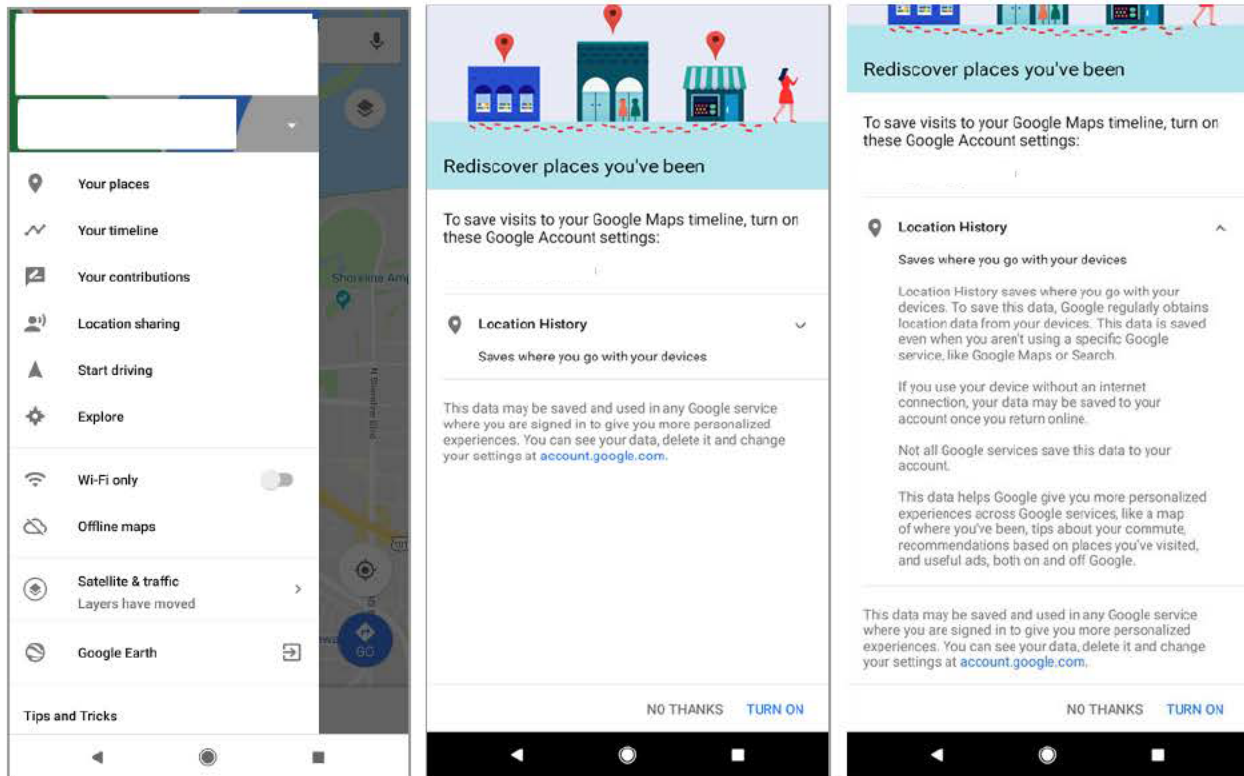


14. If the user tapped “TURN ON” as shown in ¶ 13, regardless of whether the additional information was expanded, LH would have been enabled on the Subject Account.

15. Likewise, if the user of the Subject Account navigated through the Google Maps application and selected “Your timeline” on the left-hand screen below, the user would have been presented with the screen in the middle below. And if the user then tapped the gray



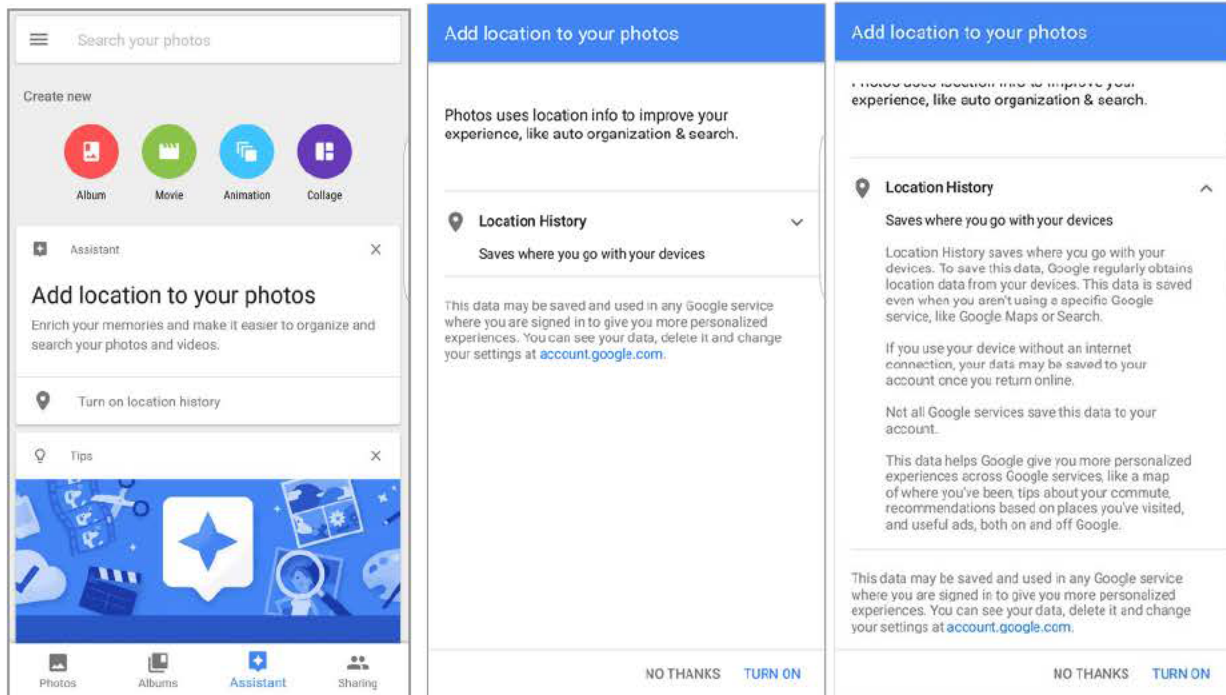
expansion arrow next to “Location History: Saves where you go with your devices” on the middle screen below, the user would next have been presented with the additional information depicted on the right below:



16. If the user tapped “TURN ON” on the middle screen (or with the additional information expanded as depicted on the right) as shown in ¶ 15, LH would have been enabled on the Subject Account.

17. As another example, the user of the Subject Account could have opted in to the LH service through the Google Photos application, as depicted by the following screens. If the user tapped on “Turn on location history” on the left-hand screen below, the user would have been presented with the screen in the middle below. If the user tapped the gray expansion arrow next to “Location History: Saves where you go with your devices” on the middle screen below,

the user would next have been presented with the additional information depicted on the right below:



18. If the user tapped “TURN ON” on the middle screen (or with the additional information expanded as depicted on the right) as shown in ¶ 17, LH would have been enabled on the Subject Account.

19. Between July 9, 2018 and May 20, 2019, monthly Timeline updates summarizing the user’s monthly Location History activity (and reminding the user that the user’s LH setting is turned on) were sent to users who had viewed their Google Maps Timeline (e.g., available at [timeline.google.com](https://timeline.google.com)).<sup>4</sup> Google has no records reflecting that such emails were sent to the user of

<sup>4</sup> Currently, the monthly Timeline updates are sent to all users who have sufficient monthly LH for the summaries, regardless of whether the user viewed his or her Google Maps Timeline.



the Subject Account. This could be because no such emails were sent or because the records from that time period no longer exist.

### **III. “Device Location” Setting**

20. As I testified in my first declaration, *see* ECF No. 96-1 at 2-3, in order for a particular mobile device to send location data to LH, the device-location setting must be on for that device. Enabling the device-location setting allows the device to determine its location, which can be used by applications and services with requisite permissions.

21. On Android devices, the device-location setting is found under Android “Settings,” under the “Location” menu. As of July 9, 2018, and continuing to today, an Android user has the ability to turn the device-location setting on or off.

22. Toggling the device-location setting on or off does not affect whether LH is enabled for the user’s Google Account or whether the Location Reporting subsetting within LH is enabled for that device. It simply affects whether there is any location information available to be shared with LH from the device. If LH and Location Reporting have been enabled and the user turns off the device-location setting, LH and Location Reporting will remain enabled, but there would not be any location information available to be shared with LH from the device. When the device-location setting is turned back on, it would become possible for location information to be shared with LH from the device (assuming LH and Location Reporting have previously been enabled).

23. Google does not store and thus has no record of when the user of the Subject Account may have toggled the device-location setting on or off.

#### **IV. Permitting Location Sharing With Google**

24. As I testified in my first declaration, *see* ECF No. 96-1 at 2-3, on iOS devices, the user must further configure the user's mobile device to grant the required device-level location permission for an application to share location data with LH. For example, a user of an iOS device can allow Google Maps to access and transmit the device's location by toggling the location permissions for Google Maps to "Always," "While Using the App," or "Never." An iOS device can share location data with LH from a particular application only if the user sets the location permission for that application to "Always."

25. On Android devices, the number of applications that have device-level location permissions enabled impacts the frequency with which location data may be shared with LH. A user may configure applications, such as Google Maps, to access and transmit the Android device's location by toggling the location permissions for the application to "Allowed All the Time," "Allowed Only While in Use," or "Denied."

26. These location permissions are specific to each application, and toggling them does not affect whether LH is enabled for the user's Google Account or whether the Location Reporting subsetting is enabled for that device. This was true as of July 9, 2018 and remains the case today.

27. Google does not retain records reflecting when these permissions are modified for various applications and so has no record of when the user of the Subject Account may have modified these permissions for any applications on the user's device.

#### **V. Signing in to a Google Account**

28. As I testified in my first declaration, *see* ECF No. 96-1 at 3, a particular device will not report location information to LH on a particular Google Account unless the user has

signed into that account on that device. On an Android device, this means that the user must associate the user's Google Account with the device through the device settings.<sup>5</sup> Signing into the account through any other means, such as on a web browser, is not sufficient to allow reporting of location data to LH. Moreover, if the user has enabled LH in the user's Google Account and enabled the Location Reporting subsetting in LH for a device, but subsequently removes the user's Google Account from that device through the device settings, the device will stop reporting location to LH (even though LH remains enabled on the Google Account). This was true as of July 9, 2018 and remains the case today.

29. Google has no record showing when the user of the Subject Account may have associated or disassociated the account from the Samsung S9+ SM-G965U device.

## **VI. Default Settings**

30. The default setting for LH at the initial account creation is "off."

31. Android devices, including a Samsung S9+ SM-G965U running Android O.S. 8.0, revision number G95USQS3BRK3, have a default setting for Location Reporting as "off," with Location Reporting for the device being enabled based on user action on the device or elsewhere.

32. The default setting for the device-location setting at the initial set-up of any Android device running Android O.S. 8.0 and earlier is "on."

## **VII. Version History**

33. The consent text and steps I described above at ¶¶ 7-18 constituted the supported consent flow that was required to successfully opt in to LH as of July 9, 2018 (UTC), when the

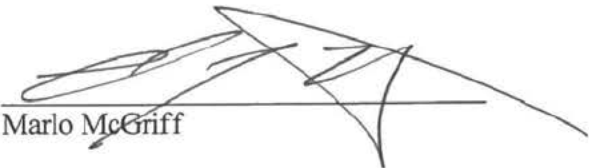
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<sup>5</sup> See Google, *Add or remove an account on Android*, <https://support.google.com/android/answer/7664951?hl=en> (visited July 22, 2020).

user of the Subject Account opted in to LH, and the consent text has remained unchanged since that time.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed this 30<sup>th</sup> day of July 2020, in SAN FRANCISCO.

  
Marlo McGriff